Postgraduate Veterinary Training in Conservation Medicine: An Interdisciplinary Program at Murdoch University, Australia

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Abstract

Although many veterinarians in Australia have been interested in wildlife conservation, the concept of active and worthwhile involvement in biodiversity conservation has often seemed difficult to achieve. There are many boundaries which may hinder the ability of veterinarians to contribute effectively to wildlife conservation initiatives. This article discusses postgraduate veterinary educational initiatives at Murdoch University, Perth, Western Australia, which aim to train veterinarians to effectively participate in biodiversity conservation programs. The Master of Veterinary Studies (Conservation Medicine) and the Postgraduate Certificate in Veterinary Conservation Medicine have a flexible program structure and can be undertaken entirely by distance education. Their establishment required the removal of disciplinary, institutional, cultural, experiential, and professional development boundaries, which have traditionally impeded veterinary involvement in wildlife conservation projects. The programs have proven to be very successful and have attracted students across Australia and internationally. The strong commitment of Murdoch University to interdisciplinary study and distance education, the goodwill of staff from other divisions within the university, and enthusiastic support from collaborating institutions were critical for the development and establishment of the programs.

Introduction

Global biodiversity is currently threatened by a massive extinction crisis (Rosser and Mainka, 2002). Natural selection and extinction of species are considered natural parts of the evolutionary process (Rosser and Mainka, 2002). However, the current mass extinction differs from previous ones in that it is primarily a human-induced crisis (Recher, 2001; Rosser and Mainka, 2002). Biodiversity conservation efforts are often challenged by complex environmental, political, economic, health, and social issues (Ostfeld et al., 2002). The complex challenges associated with biodiversity conservation are further compounded by the fact that in most cases decisions must be made quickly and in the face of incomplete data. The challenges to conservation of biodiversity can be effectively addressed only through interdisciplinary approaches involving diverse expertise, the efficient use of limited finance and resources, effective communication and exchange of knowledge, and the ability to reconcile polarized views and reach consensus (Karesh et al., 2002).

Conservation medicine is an emerging discipline that involves the integration of conservation biology, veterinary medicine, and human medicine in order to advance biodiversity conservation; address issues associated with the interrelationships between human, animal, and ecosystem health; and study the effects of global environmental change on these health interrelationships (Meffe, 1999; Deem et al., 2000; Tabor, 2002; Daszak et al., 2004). This new discipline was established in response to increasing concerns about the adverse effects of anthropogenic environmental change on human and animal health and to increasing evidence that disease can play an important role in driving population declines and extinctions of wildlife species (Meffe, 1999; Deem et al., 2000; Daszak et al., 2004). Conservation medicine moves away from considering diseases of humans and animals at an individual level and instead recognizes that there is a continuum of interdependence that underlies the health of all biota on this planet: the health of the biosphere, ecosystems, plants, humans, and other animals (Daszak and Cunningham, 1999; Meffe, 1999; Daszak et al., 2000, 2001, 2004; Ostfeld et al., 2002). The health of humans and other animals is affected by disruption of natural ecosystems and global loss of biodiversity. Emerging infectious diseases in humans and other animals are usually caused by changes in host-parasite ecology and associated with numerous

factors, including global travel and trade, climate change, environmental degradation, encroachment by humans into natural habitat, and increasing contact between humans, domestic animals, and wildlife (Deem et al., 2000; Tabor, 2002; Daszak et al., 2004).

Conservation medicine frames health management within an ecological context and draws together the expertise of conservation biologists, veterinarians, and physicians into teams that often collaborate with social scientists, political scientists, economists, educators, policy makers, and conservation managers to address important conservation issues (Daszak and Cunningham, 1999; Meffe, 1999; Daszak et al., 2000, 2001, 2004; Osofsky et al., 2000; Ostfeld et al., 2002).

Wildlife veterinarians have a critical role to play within interdisciplinary teams working on biodiversity conservation projects; in particular, they can contribute significantly to the planning and implementation stages of such projects (Deem et al., 2001; McInnes and Low, 2001; Karesh et al., 2002). Veterinary involvement in biodiversity conservation projects may include in situ and ex situ management of threatened wildlife species; health assessment and monitoring of wildlife and/or domestic animal populations; health studies of zoonoses, anthropozoonoses, and interspecies transmission of diseases; development of diagnostic capabilities to improve identification of disease agents in wildlife; involvement with welfare, regulation, and production aspects of wildlife utilization programs; planning of export and import procedures of wildlife species; training and capacity building in developing countries; data collection and management; research; and policy development at the local, national, and international levels (Franzmann, 1993; Seebeck and Booth, 1994; English, 1994; Deem et al., 2001; McInnes and Low, 2001).

Private veterinary practitioners also have a pivotal role to play in biodiversity conservation since they are literally “at the coal face” dealing with members of the community, their clients, on a daily basis. Private practitioners can engage in conservation efforts at the policy, local community, and personal levels. They may become involved with community conservation initiatives, local threatened species programs or wildlife utilization projects, rehabilitation of sick and injured wildlife, and

educating their clients with regard to reduction of the ecological impacts associated with their domestic animals (English, 1999).

Background to establishment of postgraduate programs in Conservation Medicine at Murdoch University

The Master of Veterinary Studies (MVS) in conservation medicine and the Postgraduate Certificate in Veterinary Conservation Medicine were offered for the first time in January 2004. Murdoch University is well placed to host the postgraduate programs in conservation medicine since the southwest of Western Australia is internationally recognized as one of 25 global biodiversity hotspot regions (Myers et al., 2000). This region is also recognized for the threats to its wildlife and the severity of its environmental degradation, which pose significant challenges to biodiversity conservation.

The author has worked in the field of conservation medicine in research and conservation programs in Australia and Indonesia for over 10 years. Since her appointment to her lectureship position at Murdoch University, she has frequently been approached by undergraduate veterinary students and registered veterinarians wanting to undertake fieldwork at wildlife conservation projects, both in Australia and overseas. The development of the postgraduate programs in conservation medicine stemmed from an awareness of the fact that the ability of veterinarians to effectively participate in biodiversity conservation projects can be greatly enhanced by the acquisition of additional theoretical knowledge in basic principles of conservation medicine, as well as from a wide variety of relevant disciplines in environmental and social sciences.

The postgraduate programs in conservation medicine at Murdoch University have a flexible structure, and their establishment required the removal of disciplinary, institutional, cultural, experiential, and professional development boundaries, which have

traditionally impeded veterinary involvement in biodiversity conservation programs (Table 1).

These conservation medicine programs were initially designed as distance education programs to enable veterinarians to undertake study while working in rural and urban regions of Australia. Since the establishment of these programs there has been increasing interest from international students, a number of whom wished to study the course in internal mode. In 2005, the first internal cohort of international students enrolled in the programs.

The postgraduate programs in conservation medicine offered at Murdoch University represent an original contribution in this field and differ from the existing conservation medicine/ecosystem health courses offered elsewhere in Australia and overseas. The postgraduate programs offered by Murdoch University were developed specifically for veterinarians and can be undertaken entirely through distance education. The flexibility in program structure enables students to tailor their program of study to suit their interests. The postgraduate programs in wildlife health and population management offered by the University of Sydney can be undertaken by both veterinarians and nonveterinarians, and students are generally required to undertake short intensive study periods, primarily based at the university's rural Camden campus. The Master of Science (Wild Animal Health) offered by the Royal Veterinary College at the University of London requires that veterinarians undertake an intensive, full-time, 1-year study course based primarily at the Royal Veterinary College. The Center for Conservation Medicine at Tufts University School of Veterinary Medicine pioneered the teaching of conservation medicine at the undergraduate level and provides extracurricular opportunities for its students, such as participation in the Envirovet Summer Institute (Gilardi et al., 2004; Kaufman et al., 2004). The Envirovet Summer Institute is a collaborative initiative involving numerous universities and conservation projects in North America and conservation projects in developing countries (Gilardi et al., 2004). It is a 6-week program offered to 25 participants (veterinary students, veterinarians, and wildlife biologists) that provides an immersion experience as they confront conservation issues in three locations, two of which are in the United States and one of which is in a developing country.

Program Structure

The Postgraduate Certificate in Veterinary Conservation Medicine comprises three required units, whereas the MVS (Conservation Medicine) contains these required units as well as elective units (Tables 2 and 3). The three required units that are offered in both postgraduate programs are VET630 Conservation Medicine, VET631 Wildlife Medicine, and VET639 Conservation Medicine Field Placement/Project. Further information regarding the structure of the postgraduate programs can be found under “Courses on offer” at the following website: http://www.vetbiomed.murdoch.edu.au/

The VET630 Conservation Medicine unit explores a range of issues related to the interdisciplinary integration of veterinary medicine, conservation biology, and public health. The contents of this unit go beyond the scope of health issues and the role of veterinarians in conservation medicine and explore issues from the disciplines of conservation biology, environmental science, and social sciences that are pertinent to biodiversity conservation and upon which the success of conservation projects often depends (e.g., threatening agents associated with population decline and species extinction, wildlife management, habitat management, sustainable development and utilization of wildlife, indigenous knowledge and community participation in biodiversity conservation projects). Certain aspects of this unit were established in collaboration with and reviewed by an ecologist, biologist, indigenous veterinarian, and social scientist.

The aim of the VET631 Wildlife Medicine unit is to provide students with the basic skills necessary to deal with sick and injured wild fauna, including wildlife cases which could be presented for examination and treatment to veterinarians in private practice. This unit covers appropriate methods of physical and chemical restraint, diagnosis and treatment of common diseases and injuries, zoonoses, and nutrition and husbandry associated with management of wild fauna in captivity. The unit has five compulsory modules and a range of 11 topics relevant to veterinarians working with wildlife in private practice,

zoos, or wildlife conservation projects. This unit was developed and is taught in collaboration with staff from the Perth Zoo Veterinary Department.

The VET639 Conservation Medicine Field Placement/Project unit requires the substantial investigation of a topic relevant to the fields of wildlife, zoo, or conservation medicine. Students may elect to undertake a field placement with a conservation project in Australia or overseas as a component of this unit, in which case their assessment will involve completing either a project focusing on a topic related to the placement or case study reports relating to the management of clinical cases with which they were involved. Students are able to apply to the Conservation Medicine Field Placement/Program at Murdoch University to undertake a field placement at collaborating conservation institutions in Australia and overseas (Table 4). Alternatively, students are able to liaise with the program chair for these postgraduate programs to arrange a VET639 field placement/project at an appropriate conservation institution of their choice; for example, two enrolled students are currently planning to undertake long-term disease surveillance projects on jackal and pack dogs in Sikkim, India, and on African wild dogs in the province of KwaZulu-Natal, South Africa, respectively.

The variety of elective units offered in the MVS (Conservation Medicine) enables students to tailor the program to their interests. They can develop a program of study that is entirely coursework or undertake a significant research project resulting in a dissertation. Several students have opted for the latter option to enable them to be eligible to apply for PhD scholarships. Three international students graduating from the MVS (Conservation Medicine) program in 2005 applied for international student scholarships with the intention to undertake PhD projects in the field of conservation medicine.

External students are sent their course materials, comprising unit readers, textbooks, and DVDs, and are able to access audio recordings via the unit website. The unit website contains electronic resources, and students are able to participate in an online discussion forum. Although not mandatory, most students participate in the discussion forum, which serves as a virtual tutorial group. Despite the heavy workload, students often enter

extensive entries on the forum. The discussion forum enables critical reflection on the unit readings, cross-cultural interaction, and exchange of ideas as students enrolled in the course discuss the weekly topics in light of their own experiences or issues relevant to their region.

Discussion

Removing Disciplinary Boundaries

Collaboration between scientists from a range of disciplines is required to address the biological, economic, social, and political aspects of biodiversity conservation problems (Karesh et al., 2002). Karesh et al. (2002) emphasize the importance of constructing bridges “to connect castles of disciplinary knowledge” in order to ensure successful conservation outcomes.

In order to effectively contribute to biodiversity conservation, wildlife veterinarians must be able to develop a global viewpoint and see “the big picture” (Boyce et al., 1992; English, 1994; Osofsky et al., 2000). In addition to having a sound understanding of epidemiology, wildlife biology, and management, wildlife veterinarians should be familiar with principles from other disciplines that are relevant to biodiversity conservation. The need for a transdisciplinary approach to conservation medicine and ecosystem health has been highlighted in the literature (Howard, 2004; Lannigan, 2004).

The postgraduate programs in conservation medicine provide veterinarians with training and expertise, which can be applied in private practice, zoos, and wildlife conservation projects. Due to the strong commitment of Murdoch University to interdisciplinary study and the goodwill of staff from other divisions within the university, students undertaking the MVS (Conservation Medicine) are able to select electives from the biological, environmental, and social sciences (Table 3). The issues covered by these elective units

are pertinent to biodiversity conservation and often critical to the success of conservation projects.

The field placements provide students with the opportunity to work in the field with conservation managers and therefore enable them to directly experience and appreciate the necessity of an interdisciplinary approach to wildlife conservation.

Removing Institutional Barriers

In order to ensure that limited resources are used effectively and expertise is shared, it is crucial that institutions work collaboratively toward similar conservation goals. However, institutions rarely achieve the necessary levels of collaboration because of competing priorities, limited resources, intellectual property issues, silo-based administrative structures, and lack of effective communication skills (Howard, 2004; Lannigan, 2004).

Close collaborative links have been established between Murdoch University, Perth Zoo, and the Western Australian Department of Conservation and Land Management (CALM), which have resulted in long-term health-monitoring research projects associated with several endangered fauna recovery programs. These links were initially facilitated by a national collaborative grant system, which encouraged such partnerships. Perth Zoo and CALM staff are also involved in teaching and joint supervision of conservation medicine students.

Collaborative institutional associations have also been established with a number of wildlife conservation projects and zoos in Australia and overseas, to enable postgraduate conservation medicine students to undertake a field placement at one of these institutions (Table 4).

Removing Cultural Boundaries

Within a community, wildlife veterinarians are usually respected and influential societal members. Therefore, they are in a position to engage in informed debate concerning environmental issues, with the primary goal being to effect change. However, veterinarians can effectively engage in such a debate only if they have good knowledge of the relevant issues, a holistic approach to veterinary medicine, good interpersonal skills, and the ability to listen to differing points of view from stakeholders and reach consensus on important environmental issues (Keefe, 1997; English, 1999; Karesh et al., 2002).

In developing countries, biodiversity conservation initiatives must address socioeconomic issues of the rural poor if they are to have a chance of success since issues of poverty and rural development are intertwined with those of biodiversity conservation. Foreign involvement in wildlife conservation projects in developing countries has often been associated with the transfer of technology and practices from developed countries, which may be inappropriate, impractical, and unsustainable within the context of a developing country (Kock and Kock, 2003). However, foreign veterinarians can play an important role in wildlife conservation projects in developing countries as long as they have a good understanding of socioeconomic issues in these countries, are culturally sensitive, and avoid the detrimental pitfalls of value judgments associated with ecological imperialism. They should focus their efforts on “capacity building and education so that local people can become more involved in conservation programs and see the relevance of conservation in their own lives” (Kock and Kock, 2003). The postgraduate programs in conservation medicine highlight the interdependent nature of environmental conservation and sustainable development, particularly in poor rural communities. The field placements associated with the postgraduate programs enable students to work collaboratively with local veterinarians in developing countries.

Removing Experiential Boundaries

In the past, veterinarians in Australia were not trained for involvement in biodiversity conservation work. Keefe (1997) argues that many of these vets received a “blinkered” training which resulted in a lack of recognition of the broader application and relevance of their skills in relation to conservation medicine.

The training that veterinarians receive in the areas of acquisition of technical knowledge, problem solving, development of diagnostic plans, and communication provides them with skills and expertise which can be applied to wildlife conservation projects (Osofsky et al., 2000).

The training provided in the postgraduate programs enables veterinarians to adapt their existing skills and to develop specialist expertise in wildlife and conservation medicine, as well as other relevant discipline areas. The field placement unit enables them to apply the theoretical aspects of the course in a practical context in a conservation project within Australia or overseas.

Removing Professional Development Boundaries

The postgraduate programs in conservation medicine, the MVS (Conservation Medicine) and Postgraduate Certificate in Veterinary Conservation Medicine, are flexible in their structure and mode of offering. Both programs are offered in both internal and external modes and can be undertaken by full-time or part-time study. The fact that these programs can be studied via distance education has provided greater access for veterinarians who are not able to leave the workplace in order to take up full-time study. Course fees are paid on a unit basis per semester; therefore, students who undertake study in part-time mode can spread their fees over several years. The majority of postgraduate students enrolled in the conservation medicine programs are studying externally and in

part-time mode. The veterinarians undertaking these programs are located in rural and urban communities throughout Australia and overseas; two of our students actually commenced their studies while based on sub-Antarctic islands. These postgraduate programs are particularly relevant for veterinarians in both developed and developing countries, providing training and knowledge to enable them to contribute to the development and implementation of effective wildlife conservation policy and practice.

The MVS (Conservation Medicine) and the Postgraduate Certificate in Veterinary Conservation Medicine degrees have proven to be very successful and have attracted students across Australia and internationally. To date, we have had 205 enquiries, of which 97 have been from international students representing 30 countries. Enrollments in these postgraduate programs have far exceeded initial expectations for the early years following program establishment. There are currently 40 students enrolled in the postgraduate programs, 14 of whom are international students from nine countries (Abu Dhabi, Hong Kong, India, Italy, Nigeria, Singapore, Thailand, United Kingdom, United States). Six students have graduated from the program, and three of these students have applied for scholarships to undertake PhD research programs.

The unique nature of these postgraduate programs has been recognized by the quality of candidates currently enrolled and their unsolicited comments, a selection of which is provided below:

> More recently I have felt motivated to increase the level of my professional involvement in wildlife and conservation medicine issues. I believe that this course from Murdoch offers a tremendous opportunity for me to achieve this goal and that its successful completion will help me to make a significant contribution to this field in the future. (Dr Gareth Pearce, Lecturer in Farm Animal Health, Director of Studies in Veterinary Medicine, Magdalene College, University of Cambridge, UK)

> At the 2004 Joint Conference of the AAZV, AAWV and the WDA, I attended Dr Warren's presentation on the educational opportunities offered by Murdoch University in the field of conservation medicine. I left the talk intrigued by the possibility of participating in the postgraduate conservation medicine program while continuing my work as a clinician. Several years ago, I approached two local universities (Yale and Fairfield University) regarding part-time studies, but no such programs were available....The distance education program offered by Murdoch University seems tailor-made for my situation and my interests in wildlife conservation medicine. (Dr Timothy Plunkett, Cornell Graduate, USA)

> We already spent a long time overseas, working in a wildlife rescue center in Argentina, which was an enriching and very interesting experience. There we decided to find a course which could increase and integrate our knowledge in wildlife medicine, and "Conservation Medicine" in Perth seemed to be the best option for us. (Drs. Carlo Pacioni and Sabrina Trocini, Italy)

> The course offered through Murdoch, unlike similar courses offered at the University of Sydney or the Royal Veterinary College in London, has a wider curriculum and therefore arguably a broader application. (Dr. Georgiana Sheridan, NSW, Australia)

Student feedback from formal surveys conducted by the Teaching and Learning Centre at Murdoch University on the conservation medicine and wildlife medicine units indicated that students were highly satisfied with the content and quality of teaching. Mean survey results for 2004 ranged between 3.45 and 3.67 for both units in response to "Overall, I was satisfied with the quality of this unit" and "Overall, I was satisfied with the quality of teaching in this unit," respectively. Responses are scored on a scale of 1 to 4, where 3 indicates "agree" and 4 indicates "strongly agree."

Conclusions

This article has discussed the postgraduate programs in conservation medicine offered by Murdoch University. The strong commitment of Murdoch University to interdisciplinary study and distance education, the goodwill of staff from other divisions within the university, and enthusiastic support from collaborating institutions have enabled the establishment of these postgraduate programs. These postgraduate programs will continue to develop with increasing collaboration and liaison to establish new elective units and field placement options. Discussions are currently being held with regard to the possibility of establishing an elective unit in wildlife pathology and a field placement in collaboration with wildlife veterinarians working in national parks in various African countries. It is also envisaged that a virtual scholarship program could be established with industry sponsorship to provide financial assistance to veterinarians from developing countries who are prevented from undertaking the course due to financial limitations.

The postgraduate programs in conservation medicine offered at Murdoch University are removing boundaries which have traditionally impeded veterinary involvement in biodiversity conservation programs and are training veterinarians to effectively participate in the field of conservation medicine.

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Table 1

Removal of Boundaries Affecting the Ability of Veterinarians to Effectively Participate in Biodiversity Conservation Projects by Postgraduate Programs in Conservation Medicine at Murdoch University

Boundaries	Inhibiting effect	Postgraduate Program in Conservation Medicine at Murdoch University
Disciplinary	• Silo structures (Howard 2004) • Attitudinal (Howard 2000) • Lack of resources	• Strong tradition of interdisciplinary approach • Support by staff members from other disciplines
Institutional	• Lack of ability of professionals and stakeholders to collaborate • Competing priorities • Limited finance and resources • Resource competition • Lack of effective communication skills and ability to reach consensus • Intellectual property Issues	• Close collaborative links with Perth Zoo and the Western Australian Department of Conservation and Land Management • Institutional affiliations with conservation projects and zoos throughout Australia and overseas to enable field placements for postgraduate students (Table 2)
Cultural	• Lack effective interpersonal skills • Lack knowledge of relevant cross-cultural issues • Lack holistic approach and ability to see the "big picture" • Application of technology and practices that are inappropriate, impractical, and unsustainable within the context of a developing country	• The required unit VET630 Conservation Medicine uses case studies to focus on the need for effective communication skills and cross-cultural understanding. • The required unit VET639 Conservation Medicine Field Placement/Project enables students to work with conservation managers and directly experience the need for an interdisciplinary approach
Experiential	• Lack of recognition of broader application and relevance of veterinary skills • Apprehension concerning the ability to treat wildlife and effectively contribute to biodiversity conservation issues	• Training in wildlife medicine, conservation medicine, and a wide variety of discipline areas • The required unit VET639 Conservation Medicine Field Placement/Project enables practical application of the theoretical aspects of the course
Professional development	• Inability of veterinarians to leave the workplace to take up full-time study • Lack knowledge of relevant issues associated with other disciplines • Inability to pay lump sum fee associated with full-time programs	• Strong tradition in distance education among all disciplinary divisions at Murdoch University • Flexible nature of program structure enables students to tailor their study to their interests • Programs offered in internal and external modes • Programs can be undertaken by full-time or part-time study • Fees are paid per semester on a unit basis • Students studying in part-time mode spread their fees over several years

Table 2

Postgraduate Certificate in Veterinary Conservation Medicine

Table 2. Postgraduate Certificate in Veterinary Conservation Medicine

Program structure	
• Online course that can be undertaken at Murdoch campus or by distance education	
• Six months full time (or equivalent part time)	
• Total point value 12 points	
Required units	
• VET630 Conservation Medicine	4 points
• VET631 Wildlife Medicine	4 points
• VET639 Conservation Medicine Field Placement/Project	4 points

Table 3

Master of Veterinary Studies (Conservation Medicine)

Program structure	
• Online course that can be undertaken at Murdoch campus or by distance education	
• One year full time (or equivalent part time)	
• Total point value 24 points	
Required units	
• VET630 Conservation Medicine	4 points
• VET631 Wildlife Medicine	4 points
• VET639 Conservation Medicine Field Placement/Project	4, 6, or 8 points
Elective units	
• VET641 Principles of Epidemiology	4 points
• VET642 Practical Applications of Epidemiology	4 points
• VET640 Infectious and Emerging Diseases	4 points
• VET639 Surveillance Research Project	12 points
• VET621 Clinical Pathology	3 points
• VET620 Diagnostic Imaging	3 points
• MSC545 Communication and Conflict Management	4 points
• EDU627 Development and Conflict: Educational and Social Issues	4 points
• EDU450 Environmental Education	4 points
• BIO550 Conservation Biology	4 points
• STP412 Ecologically Sustainable Development	4 points
• ENV412 Global and Regional Sustainability	4 points
• STP576 Ecology, Society and Human Health	4 points
• AST450 Society, Culture and Ecology in South-East Asia	4 points
• STP406 Environmental Ethics	4 points
• ENV450 Environmental Monitoring	4 points
• ENV424 Geographic Information Systems for Environmental Management	4 points
• ENV428 Environmental Policy and Law	4 points
• ENV516 Environmental Policy for the 21st Century	4 points
• ENV521 Business and the Environment	4 points
• STP456 Marine Conservation Policy and Coastal Sustainability	4 points

Table 4

Conservation Medicine Field Placement Program Offered by Murdoch University for Postgraduate Students Studying the Required Unit VET639 Conservation Medicine Field Placement/Project

Table 4. Conservation Medicine Field Placement Program Offered by Murdoch University for Postgraduate Students Studying the Required Unit VET639 Conservation Medicine Field Placement/Project

Institution	Country	Length of field placement
Centre for Conservation Medicine	New Zealand	4 weeks or 3 months
Healesville Sanctuary	Australia	4 weeks
Kanyana Wildlife Rehabilitation Centre	Australia	4 weeks or 3 months
Mohololo Wildlife Rehabilitation Centre	South Africa	4 weeks
Perth Zoo	Australia	4 weeks
Pink Pigeon Project	Mauritius	6 months
Project Eden – Threatened Species Project	Australia	4 weeks
Sumatran Orang-utan Conservation Project	Indonesia	3 months
Taronga Zoo	Australia	4 weeks
The Marine Mammal Center	United States	3 weeks